



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

1.2

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

08/902,331 07/29/97 GRUENENFELDER

P 622/42052DIV

EXAMINER

IM52/0102

EVENSON MCKEOWN EDWARDS & LENAHA
SUITE 700
1200 G STREET N W
WASHINGTON DC 20005-3814

CANTELMO, G

ART UNIT

PAPER NUMBER

1753

DATE MAILED:

01/02/01

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/902,331

Applicant(s)
Gruenenfeld r t al.

Examiner
Gregg Cantelmo

Group Art Unit
1753



☒ Responsive to communication(s) filed on Oct 18, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 35-37, 44, and 45 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 35-37, 44, and 45 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1753

DETAILED ACTION

Response to Amendment

1. In response to the amendment filed on October 18, 2000:
 - a. The 112 first paragraph rejection of claims 35-37 and 44 presented in the previous office action stands;
 - b. The requirement for a new oath presented in the previous office action stands;
 - c. The specification objection presented in the previous office action stands.

Oath/Declaration

2. This application presents a claim for subject matter not originally claimed or embraced in the statement of the invention. The new matter is that which is discussed in detail in both the specification objection and 112 first paragraph rejection. Since this application is a divisional of U.S. patent No. 5,688,381, the disclosures of both applications must be identical else applicant is advised to pursue any continuing applications as a Continuation-in-Part as opposed to a Divisional. In doing so, a supplemental oath would be required. A supplemental oath or declaration is required under 37 CFR 1.67. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02.

Art Unit: 1753

Specification

3. The amendment filed October 18, 2000 and entered as per the CPA request is objected to under 35 U.S.C. 132 because it does not rectify the issue new matter introduced in by the amendment received February 10, 2000 and amended into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the various steps recited in the order indicated in this amendment nor of preferred values or distances employed therein.

In addition, by amending the specification and claims, it would appear that this application is no longer carved out of the parent case from which this application is a division of and hence would not be in accordance with 35 U.S.C. 120 and 121. The application may be more suitably filed as a CIP as opposed to it's current filing as a divisional application of U.S. patent No. 5,688,381. In doing so applicant is advised to review MPEP section 201.06(c) directed to the specification and drawings wherein applicant is advised that a new oath/declaration along with a surcharge is required and the applicant should be redesignated as a CIP. Applicant is again advised to cancel the new matter in reply to this office action.

Claim Objections

4. Claim 45 is objected to because of the following informalities: the term "workpiee" in line 7 of the claim should be workpiece. Appropriate correction is required.

Art Unit: 1753

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 35-37 and 44-45 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In light of submitted claim 44, this claim teaches of a relationship between the degree of taper and radius by manipulating numerous equations. The relationship defined as $0.2 r_1 \leq d_0 \leq 0.54 r_1$. However there is no support for such a critical limitation. Applicant relies on support and disclosure provided in the amendment and not clearly and sequentially disclosed within the original application in the same manner. At one point applicant recites that a preferred distance a is 30% d_{113} . The skilled artisan would not have been led to such a preferred distance without the specific teachings of the new matter presented in applicants amendment to the specification.

Since this claimed limitation is a critical feature of the instant invention, the disclosure as recited in the original application is not enabling for the claimed relationship. The examiner has interpreted such a limitation such that by teaching of the same target dimensions, the target will inherently generate the same taper at some point during sputter operation. Furthermore, it would

Art Unit: 1753

not have been clear to one having ordinary skill in the art to employ a target having an amount of taper defined by the relationship: $0.2 r_1 \leq d_0 \leq 0.54 r_1$ since the original specification fails to provide any teaching toward deriving such a critical feature.

Response to Arguments

7. Applicant's arguments filed October 18, 2000 have been fully considered but they are not persuasive. In particular:

Applicant appears to take the position that the derivation of the relationships follows the logical reasoning to one skilled in the art and that there is nothing arbitrary about the preferred values selected. The derivation of the equations is held by applicant as "merely the exercise of ordinary skill, not inventive skill." If such is the case applicant is invited to submit such evidence in the form of a declaration.

If new subject matter is added to the disclosure, whether it be in the abstract, the specification, or the drawings, the examiner should object to the introduction of new matter under 35 U.S.C. 132 or 251 as appropriate, and require applicant to cancel the new matter. If new matter is added to the claims, the examiner should reject the claims under 35 U.S.C. 112, first paragraph - written description requirement. In re Rasmussen, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981). The examiner should still consider the subject matter added to the claim in making rejections based on prior art since the new matter rejection may be overcome by applicant.

Art Unit: 1753

In an instance in which the claims have not been amended, per se, but the specification has been amended to add new matter, a rejection of the claims under 35 U.S.C. 112, first paragraph should be made whenever any of the claim limitations are affected by the added material.

When an amendment is filed in reply to an objection or rejection based on 35 U.S.C. 112, first paragraph, a study of the entire application is often necessary to determine whether or not "new matter" is involved. Applicant should therefore specifically point out the support for any amendments made to the disclosure (See MPEP 2163.07).

Applicant argues that the above amendment to the specification as well as the relationship recited in independent claim 44 does not constitute new matter. The examiner is not persuaded.

First, in order to arrive at such a relationship applicant required a lengthy amendment to the specification. The applicant appears to have taken numerous relationships disclosed throughout the specification and arbitrarily selected preferred values such as the preferred 30% d113 to arrive at the particular relationship recited in claim 44 and the amendment to the specification incorporating new matter. Furthermore, the equation (3) is not found within the original disclosure and was a point of contention discussed in the previous personal interview. Equation (4) recites "1/07" wherein no such explicit disclosure is found in the original application. Applicant incorporates preferred combination of 8 relationships with preferred distances and parameters to arrive at the relationship $0.2 r_1 < d_0 < 0.54 r_1$. The skilled artisan would not have been led to such a conclusion based on the originally filed disclosure.

Art Unit: 1753

In addition, as a divisional application of U.S. patent No. 5, 688,381 such an amendment to both the specification and claims would not be considered proper since the disclosure of the parent 5,688,381 and that of this application would be substantially different in content. Thus the instant application would be more appropriately filed as a CIP and not a divisional as is it's current continuing status.

Applicant again is advised and invited if they wish to pursue such disclosure to be incorporated into the application to refile as a CIP as discussed above.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Art Unit: 1753

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (703) 305-0635. The examiner can normally be reached on Monday through Thursday from 8:30 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen, can be reached on (703) 308-3322. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

gc


NAM NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

December 31, 2000